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Automatic Reminders Based On User Queries

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Automatic Reminders Based On User Queries

ABSTRACT

Users commonly use devices such as smartphones, smart speakers, smart displays, etc. to discover or search for meanings of words, terms, or concepts. This disclosure describes techniques that enable users to set reminders and alerts via their devices regarding words and/or concepts that they intend to learn. Per techniques of this disclosure, when a repeat query from a user about a word or concept is detected, the user is asked if they would like to set a reminder for the word or concept. After the user sets the reminder, the user is provided with a reminder question or additional information regarding the word or concept at a suitable later time. The reminder setting can be turned off by the user, or can be turned off automatically after a certain number of correct responses from the user.

KEYWORDS

- Voice assistant
- Virtual assistant
- Reminder
- Smart speaker
- Smart display
- Spoken query
- E-learning

BACKGROUND

Users commonly use devices such as smartphones, smart speakers, smart displays, etc. to discover or search for meanings of words, terms, or concepts. Sometimes, users, e.g. non-

native speakers learning a new language, students learning new concepts, etc. make repeated queries about the same word, term, or concept.

DESCRIPTION

This disclosure describes techniques that enable users to set reminders and alerts via their devices regarding words and/or concepts that they intend to learn. When a repeat query from a user about a word or concept is detected, e.g., by a virtual assistant, a search engine, or other query-answering application, the user is asked if they would like to set a reminder for the word or concept. After the user sets a reminder, the user is provided with a reminder question or additional information regarding the word or concept at a suitable later time.

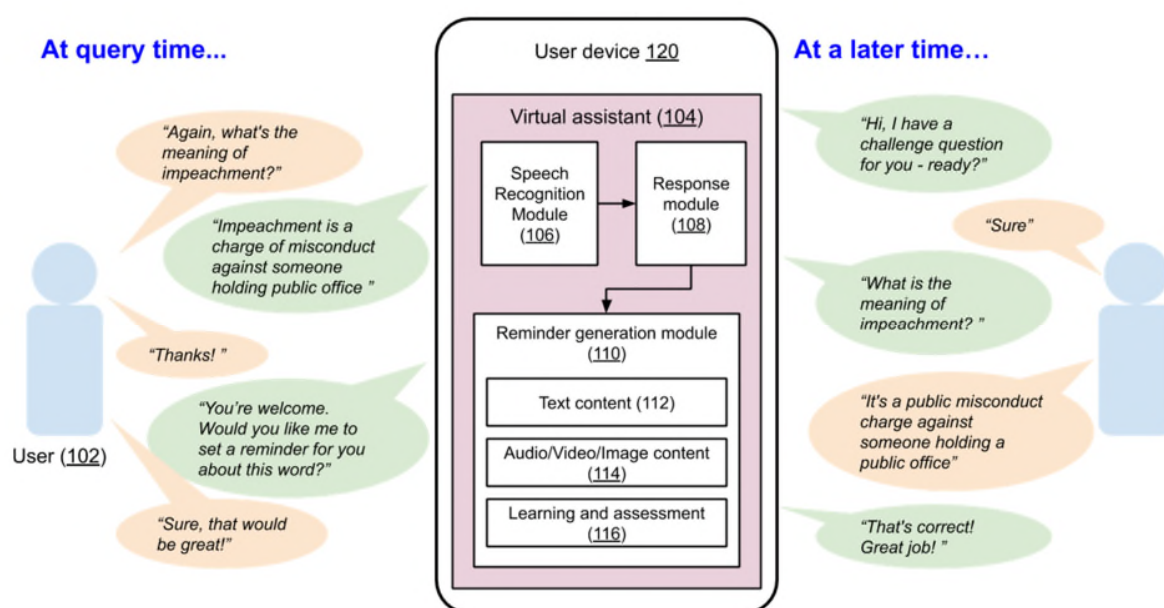


Fig. 1: Reminders for repeat queries

Fig. 1 illustrates an example of setting and utilization of reminders regarding a newly learnt word by a user, per techniques of this disclosure.

In this illustrative example, a user (102) attempting to learn the meaning of a word makes a query (“Again, what's the meaning of *impeachment*?”) to a virtual assistant (104), e.g., provided via a user device (120), e.g., a smartphone, smart speaker, smart display, wearable device, or other device. The virtual assistant, using a speech recognition module (106), interprets the request and using a response module (108) provides a response to the user (“*Impeachment* is a charge of misconduct against someone holding public office”).

With user permission, the virtual assistant detects that the user query is a repeat query about the same word (*impeachment*). Upon such detection, the user is prompted (“Would you like me to set a reminder for you about this word?”) regarding whether the user would like to set a reminder for the word. In this illustrative example, the user provides a confirmation to the virtual assistant to set a reminder (“Sure, that would be great!”).

At a subsequent time, the virtual assistant poses a query (“What is the meaning of *impeachment*?”) to the user per the user’ requested reminder. In this illustrative example, the user responds correctly (“It's a public misconduct charge against someone holding a public office”). The reminder setting can be turned off by the user, or automatically by the virtual assistant after a certain number of correct responses (with automatic assessment being performed by the virtual assistant) from the user.

The virtual assistant application can include a reminder generation module (110), which can include modules for generation of text (112), audio/video/image content (114), and learning and assessment (116). Reminders are generated based on user settings and device capabilities.

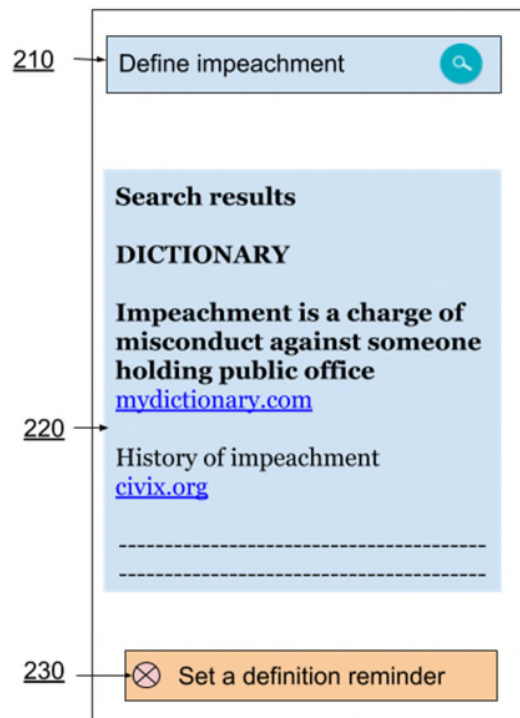


Fig. 2: Reminders for newly learned words and concepts can be set by users

Fig. 2 illustrates a search (210) conducted by a user via a computing device. In this illustrative example, in addition to the results (220) of the search, the user is also provided with a button (230) to set a reminder regarding the searched word. After the user sets the reminder, at suitable times, the user is provided with additional information (videos, images, etc.) regarding the word and/or is prompted with a question that enables the user to verify their knowledge of the word. The reminder can include audio/video, a learning activity (e.g., an interactive question-answer set), etc.

In addition to word definitions, the techniques of this disclosure can be applied to any query, e.g., mathematical formulae, historical facts, scientific facts, or any other topic.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein

may enable collection of user information (e.g., information about a user's past queries, language abilities, a user's preferences), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure describes techniques that enable users to set reminders and alerts via their devices regarding words and/or concepts that they intend to learn. Per techniques of this disclosure, when a repeat query from a user about a word or concept is detected, the user is asked if they would like to set a reminder for the word or concept. After the user sets the reminder, the user is provided with a reminder question or additional information regarding the word or concept at a suitable later time. The reminder setting can be turned off by the user, or can be turned off automatically after a certain number of correct responses from the user.